


The Timken Company

4500 Mt Pleasant St. NW

N. Canton, OH 44720

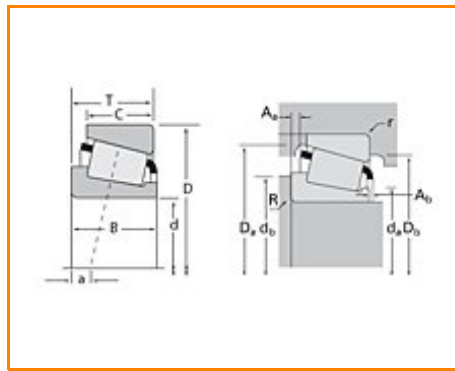
Phone: (234) 262-3000

E-Mail: CustomerCAD@timken.com • **Web site:** www.timken.com

Timken Part Number X32012X - Y32012X, Tapered Roller Bearings - TS (Tapered Single)

Metric

This is the most basic and most widely used type of tapered roller bearing. It consists of two main separable parts: the cone (inner ring) assembly and the cup (outer ring). It is typically mounted in opposing pairs on a shaft.



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Specifications

Series	32012X
Cone Part Number	X32012X
Cup Part Number	Y32012X
Design Units	METRIC
Bearing Weight	0.600 Kg 1.30 lb
Cage Type	Stamped Steel

Dimensions

d - Bore	60.000 mm 2.3622 in
D - Cup Outer Diameter	95.000 mm 3.7402 in
B - Cone Width	23.000 mm 0.9055 in
C - Cup Width	17.500 mm 0.6890 in
T - Bearing Width	23.000 mm 0.9055 in

Abutment and Fillet Dimensions

R - Cone Backface "To Clear" Radius¹	1.520 mm 0.06 in
r - Cup Backface "To Clear" Radius²	1.52 mm 0.06 in
da - Cone Frontface Backing Diameter	66.04 mm 2.60 in
db - Cone Backface Backing Diameter	68.07 mm 2.68 in
Da - Cup Frontface Backing Diameter	91.90 mm 3.62 in
Db - Cup Backface Backing Diameter	86.11 mm 3.39 in
Ab - Cage-Cone Frontface Clearance	2.5 mm 0.1 in
Aa - Cage-Cone Backface Clearance	1.3 mm 0.05 in
a - Effective Center Location³	-1.8 mm -0.07 in

Basic Load Ratings

C90 - Dynamic Radial Rating (90 million revolutions)⁴	25100 N 5640 lbf
C1 - Dynamic Radial Rating (1 million revolutions)⁵	96700 N 21700 lbf
C0 - Static Radial Rating	132000 N 29600 lbf
C_{a90} - Dynamic Thrust Rating (90 million revolutions)⁶	18500 N 4150 lbf

Factors

K - Factor⁷	1.36
e - ISO Factor⁸	0.43
Y - ISO Factor⁹	1.39
G1 - Heat Generation Factor (Roller-Raceway)	51.2
G2 - Heat Generation Factor (Rib-Roller End)	31.4
Cg - Geometry Factor	0.0982

¹ These maximum fillet radii will be cleared by the bearing corners.

² These maximum fillet radii will be cleared by the bearing corners.

³ Negative value indicates effective center inside cone backface.

⁴ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values.

⁵ Based on 1×10^6 revolutions L_{10} life, for the ISO life calculation method.

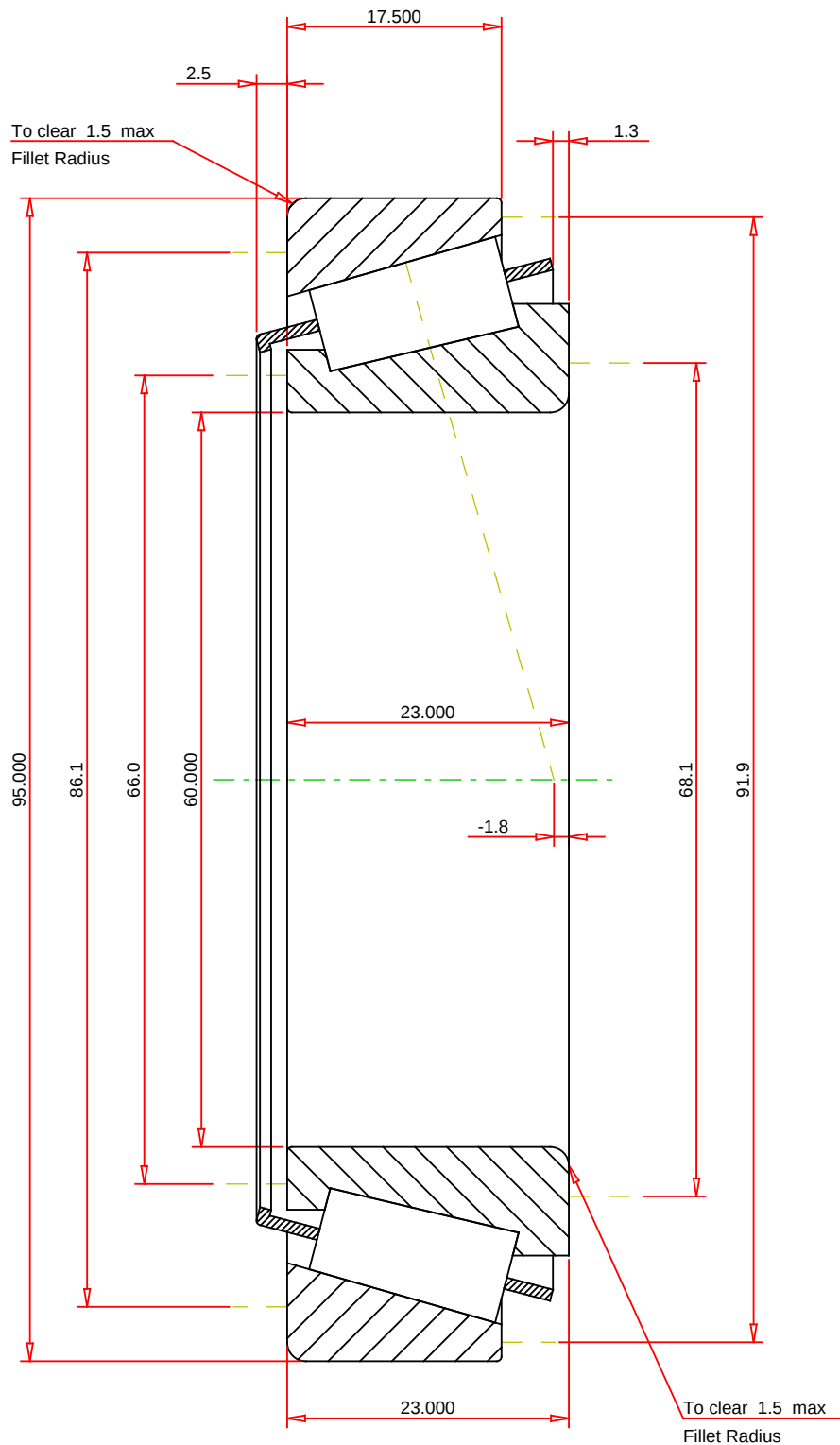
⁶ Based on 90×10^6 revolutions L_{10} life, for The Timken Company life calculation method. C_{90} and C_{a90} are radial and thrust values for a single-row, $C_{90(2)}$ is the two-row radial value.

⁷ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.

⁸ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction

on use.

⁹ These factors apply for both inch and metric calculations. Consult your Timken representative for instruction on use.



METRIC UNITS

ISO Factor - e	0.43
ISO Factor - Y	1.39
Bearing Weight	0.6 kg
Number of Rollers Per Row	24
Effective Center Location	-1.8 mm

TIMKEN®

THE TIMKEN COMPANY
NORTH CANTON, OHIO USA

X32012X - Y32012X
TS BEARING ASSEMBLY

K Factor	1.36	
Dynamic Radial Rating - C90	25100	N
Dynamic Thrust Rating - Ca90	18500	N
Static Radial Rating - C0	132000	N
Dynamic Radial Rating - C1	96700	N

Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

FOR DISCUSSION ONLY